Abstracts

Wideband Bidirectional MMIC Amplifiers for New Generation T/R Module

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Two novel bidirectional amplifier approaches have been conceived and demonstrated with MMICs. These amplifiers are needed in bidirectional transmit/receive (T/R) modules, where close gain and phase tracking are critical. Excellent gain and phase tracking are inherent in the presented bidirectional amplifier approaches, since the same gain elements are used in both the transmit and receive modes. The Bidirectional Distributed Amplifier (BDA) has exhibited better than ±0.4 dB in gain tracking and ±2.5 degrees in phase tracking between the transmit and receive modes over a 2 to 18 GHz band. The Bidirectional Balanced Amplifier (BBA) has shown better than ±0.4 dB in gain tracking and ±1.5 degrees in phase tracking over a 6 to 18 GHz band.

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